

FIELD CROP ABSTRACTS

Volume 26



Prepared by

**Commonwealth Bureau of Pastures
and Field Crops, Hurley**

1973

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FIELD CROP
ABSTRACTS

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The Commonwealth Agricultural Bureaux (CAB), a co-operative venture established by the Commonwealth, provides the only comprehensive information service for agricultural research workers. This is based on a series of 19 abstract journals which cover the whole range of agricultural science. These journals have a large, world-wide readership.

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COMMONWEALTH BUREAU OF PASTURES AND FIELD CROPS

HURLEY, MAIDENHEAD, BERKS SL6 5LR, UK

The Commonwealth Bureau of Pastures and Field Crops is located at the Grassland Research Institute, Hurley, and is one of a group of 11 Bureaux and 3 Institutes which together form the Commonwealth Agricultural Bureaux, an organization financed and administered jointly by the various Commonwealth Governments and Dependent Territories. The Commonwealth Agricultural Bureaux produces 19 abstract journals covering the major branches of agricultural and related sciences. These journals and their subscription rates are listed on the back cover.

The Bureau prepares two monthly journals, *Herbage Abstracts* and *Field Crop Abstracts*, for publication by the Commonwealth Agricultural Bureaux, Farnham Royal, Bucks. These journals contain abstracts of the research findings reported in the world scientific literature on annual field crops, pastures, herbage plants and rangelands and provide both a comprehensive guide to current scientific and technological developments in their subjects and a key to the literature published in the past. In addition to abstracts, the Bureau also issues reviews and monographs on selected subjects.

Scope of Field Crop Abstracts: The subjects covered include the agronomy and major aspects of the biology of all annual field crops grown for food, fodder, oil and fibre, and of tobacco. Land use, farming systems, agricultural meteorology and the control of weeds, pests and diseases are dealt with only in so far as they concern the crop coverage.

The Bureau is prepared, on request, to undertake literature searches and to compile bibliographies on subjects within its scope. A list of bibliographies already compiled is published in this journal.

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NOTES TO READERS

The address given at the end of abstract citations is that of the first author at the time of writing and is normally where the work was carried out.

Transliteration of Cyrillic script is based on the International Standard ISO/R9 1968 (E)

The titles of periodicals and reports conform where possible to those given in the *World List of Scientific Periodicals* (4th Edn; London: Butterworth) and are listed in *Field Crop Abstracts* Vol. 25, No. 1, pp. xix-xiv; they can also be obtained as a separate from the Bureau of Pasture and Field Crops, Hurley, Maidenhead SL6 5LR, price 25p.

One-side-only copies of *Field Crop Abstracts* are available at £2.00 above the annual subscription rate.

LANGUAGE SYMBOLS

The language symbols used are listed below. An initial capital letter denotes the main language of a paper, a small letter the language of the summary(ies).

Afrikaans	Af	French	Fr	Norwegian	No
Albanian	Al	German	De	Persian	Pe
Arabic	Ar	Greek	Gr	Polish	Pl
Belorussian	Be	Hebrew	He	Portuguese	Pt
Bulgarian	Bg	Hungarian	Hu	Romanian	Ro
Chinese	Ch	Icelandic	Is	Russian	Ru
Croat	Cr	Indonesian	In	Serbian	Sr
Czech	Cs	Interlingua	Ia	Serbo-Croat	Sh
Danish	Da	Italian	It	Slovak	Sk
Dutch	Nl	Japanese	Ja	Slovene	Sn
English	En	Korean	Ko	Spanish	Es
Esperanto	Eo	Latin	La	Swedish	Sv
Estonian	Ee	Latvian	Lv	Turkish	Tr
Finnish	Fi	Lithuanian	Li	Ukrainian	Uk
Flemish	Nl	Macedonian	Ma		

ABBREVIATIONS

The abbreviations used for the names of common units, mathematical operations, chemical elements, etc., are in accordance with British Standard 1991 : 1967. The following additional abbreviations are also used :

a.e.	—	acid equivalent	FCA	—	<i>Field Crop Abstracts</i>
a.i.	—	active ingredient	LAI	—	leaf-area index
alt.	—	altitude	LAR	—	leaf-area ratio
cv.	—	cultivar(s)	NAR	—	net assimilation rate
DM	—	dry matter	OM	—	organic matter
F s	—	from summary	RGR	—	relative growth rate
f.y.m.	—	farmyard manure			

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REVIEW ARTICLE:

Psophocarpus tetragonolobus — a crop with a future? G.B. Masfield 157

ABSTRACTS:

CEREALS

Wheat	1	53	105	163	215	269	319	371	411	473	555	633
Oats	7	59	111	170	222	274	326	376	420	483	562	645
Rye	8	59	112	172	223	275	327	376	421	485	563	646
Triticale	8	60	113	172	223	275	—	377	422	486	565	647
Barley	9	60	113	172	223	275	328	377	422	486	565	647
Wild-rice	—	—	116	—	—	—	—	—	—	—	—	—
Maize	12	63	116	175	225	277	330	379	425	491	568	652
Sweet corn	17	67	121	—	229	—	334	382	430	500	574	662
Rice	18	67	121	179	230	282	334	383	430	500	574	663
Sorghum	20	71	124	184	234	285	338	385	—	505	579	671
<i>Pennisetum typhoides</i>	—	72	126	185	235	286	339	—	433	—	580	673
<i>Panicum miliaceum</i>	20	72	—	185	235	—	339	—	—	506	580	673
<i>Panicum miliare</i>	—	—	—	—	—	—	—	—	—	—	—	673
<i>Eleusine coracana</i>	—	72	—	186	235	286	339	385	433	506	581	—
<i>Echinochloa frumentacea</i>	21	—	—	—	—	—	—	—	—	—	—	—
<i>Euchlaena mexicana</i>	21	—	—	—	—	—	—	—	—	—	—	—
Minor cereals	—	—	—	—	—	—	339	385	433	—	—	—
Cereals, general	21	73	126	186	236	286	339	385	434	507	581	673

LEGUMES

Soyabeans	21	73	127	187	237	287	341	386	437	508	582	674
Groundnuts	25	76	130	189	238	289	342	388	439	510	584	678
Peas	26	78	131	190	240	290	343	389	440	512	586	680
<i>Vicia faba</i>	28	—	—	—	—	—	—	—	—	—	—	—
<i>Vicia</i> spp.	28	79	132	192	243	292	345	390	442	515	588	682
<i>Phaseolus vulgaris</i>	29	—	—	—	—	—	—	—	—	—	—	—
<i>Phaseolus</i> spp.	—	79	135	192	245	292	347	391	443	517	590	683
<i>Phaseolus aureus</i>	31	—	—	—	—	—	—	—	—	—	—	—
<i>Vigna</i> spp.	—	81	135	194	245	294	348	392	445	520	592	688
<i>Vigna unguiculata</i>	31	—	—	—	—	—	—	—	—	—	—	—
<i>Trifolium</i> spp.	—	—	—	—	246	—	—	—	445	—	—	—
<i>Voandzeia subterranea</i>	31	—	136	—	—	294	—	—	445	—	—	688
<i>Cajanus cajan</i>	32	81	136	194	—	294	348	392	445	521	—	688
<i>Cicer arietinum</i>	—	81	—	195	246	294	348	392	446	521	593	689
<i>Lens esculenta</i>	—	81	136	195	246	294	348	—	446	521	593	689
<i>Lupinus</i> spp.	32	82	136	195	246	295	348	392	446	522	593	689
Minor legumes	—	—	—	—	—	295	349	393	446	522	—	—
Legumes, general	—	82	136	195	246	295	349	393	446	522	594	689

ROOT CROPS

Sugar beet	32	83	137	195	247	296	350	393	447	523	594	690
Fodder beet	—	—	138	197	248	299	—	—	—	—	597	692
Turnips and Swedes	—	85	138	197	249	300	351	394	448	525	598	692
Potatoes	35	85	138	197	249	300	351	394	448	526	598	692
Carrots	—	—	—	—	—	303	355	—	—	—	—	—
Sweet potatoes	37	89	141	200	250	303	355	396	452	530	604	695
Cassava	—	—	142	—	—	303	355	396	452	—	604	696
Yams	37	90	—	200	251	—	—	396	453	—	604	697
Cocoyams	—	90	142	—	—	—	356	396	—	—	604	697
Minor root crops	—	—	—	—	—	—	—	396	—	—	—	—
Root crops, general	—	—	—	200	—	304	—	396	—	—	—	—

FIBRE CROPS

Cotton	37	90	142	200	251	304	356	396	453	530	604	698
Fibre Flax	39	93	—	202	253	305	359	399	456	534	608	704
Hemp	—	93	146	203	253	306	359	—	456	534	—	705
Jute	39	93	—	203	—	306	359	399	—	—	—	705
Minor fibre crops	—	—	—	—	—	306	359	—	—	534	—	—
Fibre crops, general	39	—	146	—	—	306	—	—	456	—	608	705

OILSEED CROPS

Castor	39	93	146	203	254	306	359	399	457	535	609	705
Sesame	40	93	146	—	254	307	360	400	457	535	—	706
Oilseed flax	40	93	—	203	254	—	360	400	457	535	609	—
Safflower	40	94	146	203	254	307	360	400	457	536	609	706
Sunflower	40	94	146	204	254	307	360	400	457	536	609	706
Rape	42	95	147	204	255	308	361	401	458	538	611	708
Crambe	42	—	—	—	—	—	—	—	—	—	—	—
Poppy	43	—	—	—	—	—	—	—	—	—	—	—
Pumpkin	43	—	—	—	—	—	—	—	—	—	—	—
Minor oilseed crops	—	—	147	—	—	308	361	401	458	539	—	—
Oilseed crops, general	—	96	147	205	—	308	—	—	—	540	611	709

MISCELLANEOUS CROPS

Tobacco	43	96	148	206	256	308	362	402	459	540	612	709
<i>Brassica oleracea</i>	—	98	149	—	258	—	—	—	461	—	614	—
Fodder radish	—	—	149	—	258	—	—	—	—	544	—	—
Buckwheat	46	99	149	—	258	310	363	403	461	544	614	711
Other crops	—	—	—	—	—	310	—	—	—	544	—	—
Miscellaneous crops, general	—	—	—	—	—	—	—	403	—	—	—	—

GREEN MANURES	—	—	—	208	259	—	364	—	—	—	614	—
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CROP BOTANY

Physiology	46	99	149	208	259	310	364	403	462	544	614	712
Chemical composition	47	99	151	209	260	—	365	—	463	546	—	714
Morphology and anatomy	48	—	151	—	260	311	—	—	463	546	617	—
Environmental factors	48	99	151	209	260	311	365	404	464	546	617	714
Nodulation	—	—	—	209	261	—	—	—	—	—	619	—
Radiobiology	—	—	—	—	—	—	365	—	—	547	619	—
Taxonomy	—	—	—	—	—	—	366	—	—	—	—	—
Techniques and apparatus	48	100	151	209	261	311	366	404	464	547	619	715
Miscellaneous	49	100	152	209	262	312	—	404	465	—	620	717

WEEDS	—	100	152	210	262	312	366	405	465	548	620	717
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SURVEYS AND LAND USE	49	—	—	210	262	312	366	405	466	548	620	717
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FARMING SYSTEMS	49	101	152	210	262	313	366	405	466	548	620	717
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SOIL AND WATER CONSERVATION	—	101	—	212	262	313	—	405	—	549	622	—
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AGROMETEOROLOGY	49	101	154	212	262	313	367	405	467	549	622	720
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MISCELLANEOUS	49	102	155	—	—	—	—	406	—	550	623	721
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MEETINGS	50	102	155	—	265	315	—	—	468	551	624	723
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BOOKS	50	102	155	213	265	316	368	406	470	552	630	726
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ERRATA

(lines are counted from the beginning of the bibliographic data in each item.)

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Page	Abstract	Line	
20	185	1	for 'SAILSBERY' read 'SAILSBURY'
65	635	1	for 'MILLER, R.J.' read 'MILLER, J.R.'
79	776	1	for 'MKNAB' read 'MCNAB'
137	1319	1	for 'OUEILLETTE' read 'OUELLETTE'
343	3240	1	for 'MOZINGO' read 'MORINGO'
382	3621	3	for 'in' read 'malay'
388	3673	5	insert 'Texas' after 'Sciences'
392	3714	6	insert 'sown' after 'were'
419	3994	9	for '5 me' read '5 meq'
441	4194	20	for 'B-' read 'β'
474	4527	4	insert 'yield' after 'wheat'
479	4574	7,8	for 'a daily photosynthetic' read 'wheat cv. given various'
502	4796	10	for 'CS1' read 'CS ₁ '
503	4813	12	for 'ACP' read 'ACPC'
514	4919	11	for 'RN' read 'RNA'
570	5458	4	insert 'area of Mysore State' after 'project'
571	5462	2	insert 'height' after 'plant'
603	5771	8	for 'schreiteri' read 'schreiteri'
635	6124	17	insert 'no N in 1966-7' after 'with'
638	6156	7	for 'NP' read 'NP 835'
668	6440	16	for 'spacings, Basal' read 'on (b). In both cv.'
675	6511	9	insert 'and 3' after '3.2'
677	6534	2	insert 'fixation' after 'nitrogen'
678	6538	21	insert 'a decrease from' after '(b)'
678	6358	21	insert 'an increase' after 'germs and'
699	6743	17	insert 'more rapidly on' after 'accumulated'
718	6933	3	for 'cyanide' read 'cyanamide'